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Summary.

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(57) [Abstract]
[Technical problem] The storage and server in which the production method of a game machine and a game machine that visual fatigue of a game person can be made to mitigate and computer reading are possible are offered maintaining the feeling of the conventional pachinko game and a slot game.
[Means for Solution] Having the loudspeaker 42 which utters the voice concerning a game situation, the loudspeaker 42 utters the voice which teaches the kind of pattern by which a change display or a halt indication is given to display windows 14L, 14C, and 14R. Moreover, the effect of a binaural sound produces the voice. Furthermore, a loudspeaker 42 is a parametric loudspeaker which makes a virtual source again. In addition, the stereo dipole method which makes a virtual source is used for a loudspeaker 42.

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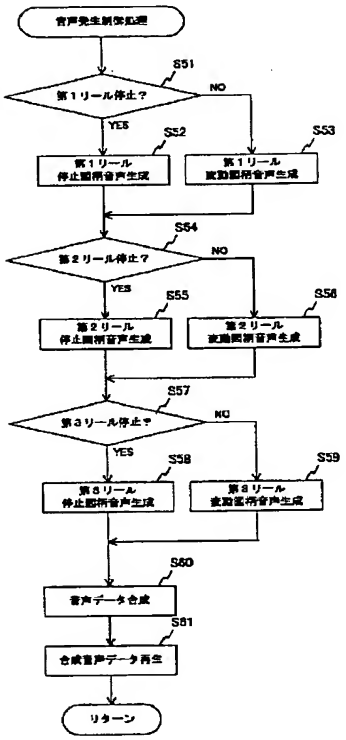


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CLAIMS

[Claim(s)]

[Claim 1] It has the display as which the identification information picture by which is prepared in a game machine, and it is indicated by change, and may be indicated by halt to predetermined timing is displayed. And it is the game machine with which the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given in the aforementioned display is performed.

It is the game machine which is equipped with the speech generation device which utters the voice concerning the situation of the aforementioned game, and is characterized by the speech generation device concerned being what utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given at the aforementioned display.
[Claim 2] The aforementioned voice is a game machine according to claim 1 characterized by being what the effect of the binaural sound which it may be made to be heard from the position which a game person has produces.
[Claim 3] The identification information picture by which it is indicated by change and may be indicated by halt to predetermined timing is displayed. And it is the production method of a game machine that the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given is performed. The production method of the game machine characterized by performing the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given.
[Claim 4] The identification information picture by which it is indicated by change and may be indicated by halt to predetermined timing is displayed. And it is the storage with which the program to which the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given is made to carry out was stored and in which computer reading is possible. The aforementioned program is a record medium which is characterized by performing the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given and in which computer reading is possible.
[Claim 5] The identification information picture by which it is indicated by change and may be indicated by halt to predetermined timing is displayed. And it is the server which communicates with the game machine with which the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given is performed. The server characterized by making the aforementioned game machine perform the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given through the aforementioned communication.

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## DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the game machine with which a discernment display image is change-displayed and halt displayed in detail about game machines, such as a pachinko game machine and a slot game machine.
[0002]
[Description of the Prior Art] A common slot game machine can gain a game medal according to the combination of the pattern by which repeats, and change-displays, two or more patterns which are two or more shown identification information pictures make indicate the advance situation of the game concerned by halt, the game person made indicate two or more patterns by which it is indicated by change by halt by the halt operation, and it was indicated by halt on the winning-a-prize line. It is winning this slot game, when the combination of the pattern by which it was indicated by halt on the winning-a-prize line turns into a predetermined combination (a success-in-an-election pattern's is called hereafter), and shifts to a success-in-an-election game state advantageous to a game person.
[0003] Moreover, a slot game machine is set up for whether being the success-in-an-election improper state which cannot be in agreement with the state which may be in agreement with a success-in-an-election pattern, and which can be won, and a success-in-an-election pattern by the random number lottery performed beforehand in front, and ******** rather than a game person does halt operation. In addition, once it is set up, the state which was mentioned above and which can be won will be continued until the combination of the pattern by which it is indicated by halt is in agreement with a success-in-an-election pattern. For this reason, two or more patterns by which it is indicated by change stare for a game person to make the combination of the pattern it is in agreement with a success-in-an-election pattern indicate the combination of two or more patterns by which it is indicated by change by halt, when it has recognized it not only performs a game, but that checked by looking two or more patterns in_which of a change display and a halt display were performed repeatedly, and the game state shifted to the state which can be won, and halt operation carries out.

[0004] Various kinds of production is performed using the display lamp, the speech generation device, etc. to, make the interest of the game person who performs a slot game continue indefinitely on the other hand. for example, when it shifts to a success-in-an-election game state, the display lamp which has not usually been turned on in the state of a game is blinked -- making -- usually -- a game state -- things -- sense of superiority is given to a game person by emitting music Moreover, naturally various production on which a game person is not usually bored in the state of a game is performed.
[0005] Furthermore, by incorporating binaural-sound generation equipment and operating it to a game machine, as a sound effect can be heard from various positions, the technology which was made to realize complication and diversification of a production mode with voice (sound effect) is indicated by JP,2001-29542,A.
[0006]
[Problem(s) to be Solved by the Invention] However, in order to continue repeating and checking by looking two or more patterns of change-displaying and halt displaying a game person though various production is taken in to make a game person's interest continuing indefinitely how much, it is difficult for there to be a possibility of accumulating visual defatigation and to enjoy a game over a long time.
[0007] Especially the low game person of progress level has many things which distinction of the state which can be won, or a success-in-an-election improper state does not attach, and when it is in a success-in-an-election improper state, he has a possibility of staring at two or more patterns by which it is indicated by change. Moreover, it becomes long and time to stare at two or more patterns by which it is not easy for the low game person of progress level to indicate two or more patterns by which it is indicated by change by halt so that it may be in agreement with a success-in-an-election pattern, and it is indicated by change, even if it is, after recognizing having shifted to the state which can be won will raise possibility of accumulating visual defatigation. Furthermore, since a visually handicapped game person cannot check a pattern by looking, he cannot perform the **** slot game itself mentioned above again.
[0008] It is to offer the storage and server in which the production method of a game machine and a game machine that visual defatigation of a game person can be made to mitigate and computer reading are possible, this invention being made in view of the **** technical problem mentioned above, and maintaining the feeling of the conventional pachinko game and a slot game.
[0009]
[Means for Solving the Problem] In order to attain the above purposes, in this invention, it has the speech generation device which utters the voice concerning the situation of the aforementioned game, and the speech generation device concerned is characterized by what utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given to the aforementioned display.

[0010] More specifically, this invention offers the following.
[0011] (1) It has the display as which the identification information picture by which is prepared in a game machine, and it is indicated by change, and may be indicated by halt to predetermined timing is displayed. And it is the game machine with which the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given in the aforementioned display is performed. It is the game machine which is equipped with the speech generation device which utters the voice concerning the situation of the aforementioned game, and is characterized by the speech generation device concerned being what utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given at the aforementioned display.
[0012] It has the speech generation device which utters the voice concerning the situation of the aforementioned game. According to invention of (1) "the speech generation device concerned [ that the voice which teaches the kind of identification information picture by which a change display or a halt indication is given to the aforementioned display is uttered"'s, and ] Since a game person can discriminate an identification information picture only by the acoustic sense based on the voice, the burden to a visual sense is mitigated and possibility of making a game person enjoying a game for a long time becomes high. Moreover, a game may be made to perform, without a visually handicapped person's also being able to perform a game now and choosing a game person.
[0013] (2) the game machine given in (1) characterized by the aforementioned voice being what the effect of the binaural sound which a game person may be made to hear from a certain position produces
[0014] According to invention of (2), it is "the effect of the binaural sound which it may be made to be heard from the position which a game person has produces the aforementioned voice." Since possibility that a game person will take in the depth perception to the voice, a feeling of movement, and a feeling of the normal position increases, Even if a game person is not conscious, unnecessary voice is eliminated, only required voice is made easy to catch, namely, possibility of causing the cocktail party effect increases, and a game can be performed, without caring about the voice from other game machines. Moreover, the presence and the three-dimensional sound field which have not been felt at the time of monophonic reproduction and stereo reproduction can be made, the width of face of production is expanded, and possibility of making a game person's interest continuing indefinitely is raised. When [ which is made like ] making a game person discriminate the kind of identification information picture especially, states, such as a position of an identification information picture and depth, its change display, or a halt display, can be directed with reality by adopting the binaural sound mentioned above.
[0015] Moreover, since a game person may be made to discriminate the aforementioned speech generation device at a game person by making into a

binaural sound voice which makes the kind of identification information picture identifiable, without actually having a sound source behind a game person etc. by making it the composition equipped with a "parametric loudspeaker" and "the loudspeaker which adopted the stereo dipole method" which makes a virtual source, ** space-ization in a game machine is realizable.

[0016] (3) The identification information picture by which it is indicated by change and may be indicated by halt to predetermined timing is displayed. And it is the production method of a game machine that the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given is performed. The production method of the game machine characterized by performing the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given.

[0017] According to invention of (3), the effect same by "the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given is performed"'s as invention of (1) can be acquired.

[0018] (4) Display the identification information picture by which it is indicated by change and may be indicated by halt to predetermined timing. And it is the storage with which the program to which the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given is made to carry out was stored and in which computer reading is possible. The aforementioned program is a record medium which is characterized by performing the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given and in which computer reading is possible.

[0019] According to invention of (4), it is "the aforementioned program performs the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given", and the same effect as invention of (1) can be acquired.

[0020] (5) The identification information picture by which it is indicated by change and may be indicated by halt to predetermined timing is displayed. And it is the server which communicates with the game machine with which the game which may shift to a state advantageous to a game person according to an identification information picture when a halt indication of the aforementioned identification information picture is given is performed. The server characterized by making the aforementioned game machine perform the step which utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given through the aforementioned communication.

[0021] According to invention of (5), the effect same by "the aforementioned game machine is made to perform the step which utters the voice which teaches the kind

of identification information picture by which a change display or a halt indication is given through the aforementioned communication"'s as invention of (1) can be acquired.

[0022] The "identification information" concerning [definition-of-term etc. this inventions] means identifiable information by visual senses, such as a character, a sign, a pattern, or a pattern (pattern). Moreover, the picture which indicates this identification information picture to be an "identification information picture" is said. This identification information picture is equivalent to the picture of the pattern mentioned later.

[0023] Moreover, it says setting "a display" in the state where an identification information picture may be checked by looking by the game person. Moreover, a "display" is a concept also containing display, such as a liquid crystal display (the LCD panel is called hereafter) which displays [ change-] and displays [ halt-] the movable object of the drum object with which the identification information picture like **** is displayed, and the identification information picture was drawn on the front face, a reel object, etc., and not only these but an identification information picture, and the Braun tube.

[0024] In moreover, when [ the case where "a change display" changes into the pattern "8" which is the identification information of others / pattern / "7" / which is one identification information when identification information changes one by one ] and when changing into other patterns "*" from a pattern "9" and displaying It is a concept containing the case where it moves one pattern "7" being displayed in a viewing area when the identification information moves and is displayed, while one identification information had been displayed in the viewing area which can display identification information, or both sides or either.

[0025] Furthermore, it is the concept included when the display mode of identification information changes (for example, when [ the case where one pattern "7" deforms, and it is displayed oblong or is displayed longwise, when a pattern is expanded and displayed or is reduced and displayed ] etc.).

[0026] On the other hand, the mode which a position is stopped and displays the identification information picture "a halt display" indicates a certain identification information to be is said.

[0027] As a concrete means for making it catch as if it existed also in the position where a loudspeaker does not exist in a game person, and realizing it with the voice outputted from the loudspeaker with which the game machine was equipped, a "parametric loudspeaker" and the loudspeaker of a "virtual source" which adopted the "stereo dipole method" are typical.

[0028]

[Embodiments of the Invention] Hereafter, the suitable operation gestalt for the game machine concerning this invention is explained, referring to drawing. In addition, this example explains the operation gestalt which applied this invention to the slot game machine. Moreover, this slot game machine 10 is explained as a thing using

coin in the following, although it is the game machine which plays a game using coin, a medal, or a token etc. which is a game medium.
[0029] Drawing showing the outline of [composition of slot game machine] slot machine 10 is shown in drawing 1 .
[0030] Three display windows 14L, 14C, and 14R of the longwise rectangle formed in the abbreviation perpendicular are formed in the transverse plane of the case 12 which forms this whole slot machine 10. these display windows 14L, 14C, and 14R -- five winning-a-prize lines -- namely, -- level -- three (a center L1, vertical L2A, L2B) -- and two winning-a-prize lines (the diagonal below is **L3A and slanting upward-slant-to-the-right L3B) are prepared aslant In the left end section and the right end section of these winning-a-prize lines L1, L2A, L2B, L3A, and L3B Sequentially from the top, the bet number-of-sheets display 18 for displaying the winning-a-prize line (an effective line being called hereafter) which became effective by the number of sheets of the thrown-in coin, and the bet number of sheets of coin is formed, as shown in "3", "2", "1", "2", and "3."
[0031] When a game person operates the 1-BET switch 20 mentioned later When one [ L1 ] of five winning-a-prize lines, for example, a winning-a-prize line, is validated and the 2-BET switch 22 is operated When 3 [ L1 ] of five winning-a-prize lines, for example, a winning-a-prize line, L2A, and L2B are validated and the maximum BET switch 24 is operated, all, L1 [ i.e., ], L2A, L2B, L3A, and L3B of five winning-a-prize lines are validated. The validated winning-a-prize line is specified by turning on the effective line display lamp 44 (not shown) prepared in the tooth back of the bet number-of-sheets display 18.
[0032] Three reels 26L, 26C, and 26R by which the picture of two or more kinds of patterns was drawn on each peripheral face are formed in the interior of a case 12 free [ rotation ]. Each of these reels 26L, 26C, and 26R is prepared possible [ a check by looking ] through the display windows 14L, 14C, and 14R mentioned above. In display windows 14L, 14C, and 14R, the rotation drive of the reels 26L, 26C, and 26R is carried out so that the picture of the pattern drawn on the peripheral face of Reels 26L, 26C, and 26R may move toward the bottom from a top so that it may mention later.
[0033] Moreover, under the display windows 14L, 14C, and 14R mentioned above, the plinth section 28 of an abbreviation horizontal is formed and the display 30 which consists of a liquid crystal display panel is formed in the center. In this display 30, a game history is displayed, production in a bonus game is performed, or the message of the **** omen information mentioned later is displayed.
[0034] The coin slot 31 which can insert a lot of coin at once on the right-hand side of display 30 is formed.
[0035] Moreover, the 1-BET switch 20 for making into the object of the bet of a game only one of the coin already thrown into the left-hand side of display 30 by one push operation, The maximum BET switch 24 for setting the coin of the possible maximum number of sheets as the object of the bet of a game at 1 time of a game is

formed among the 2-BET switch 22 for making only two of the coin already thrown in into the object of the bet of a game, and the coin already thrown in. The winning-a-prize line which mentioned above these BET switches 20 and 22 or 24 by carrying out push operation according to the BET switch by which push operation was carried out will be validated. When push operation of the 1-BET switch 20 mentioned above, the 2-BET switch 22, or the maximum BET switch 24 is done by the game person, it can make resulting in the state which can be game started.

[0036] On the left-hand side of the front face of the plinth section 28, the start lever 32 is formed possible [ tilting ]. When a game person does tilting operation of this start lever 32, rotations of three reels 26L, 26C, and 26R mentioned above are started all at once. When three reels 26L, 26C, and 26R rotate, in each of display windows 14L, 14C, and 14R, a change indication of the picture of the pattern currently drawn on each peripheral face of Reels 26L, 26C, and 26R will be given.

[0037] When the rotational speed of three reels 26L, 26C, and 26R mentioned above reaches a fixed speed, operation by the game person of the earth switches 34L, 34C, and 34R mentioned later becomes effective.

[0038] Three earth switches 34L, 34C, and 34R are formed in the center of the front face of the plinth section 28. Earth-switch 34L corresponds to reel 26L, earth-switch 34C corresponds to reel 26C, and earth-switch 34R corresponds to reel 26R. When a game person does push operation of the earth-switch 34L, reel 26L stops, when a game person does push operation of the earth-switch 34C, reel 26C stops, and when a game person does push operation of the earth-switch 34R, it is made as [ stop / reel 26R ].

[0039] When reel 26L, reel 26C, and reel 26R stop, it is controlled to be positioned at the winning-a-prize line L1 which the picture of the pattern currently drawn on each peripheral face of reel 26L, reel 26C, and reel 26R mentioned above, L2A, L2B, L3A, and L3B, and to be indicated by halt.

[0040] The expenditure button 36 is formed in the left-hand side of the start lever 32. When a game person pays out and push operation of the button 36 is carried out, from the coin expenditure mouth 38 of the transverse-plane lower part, the coin thrown in pays out and, as for the paid-out coin, coin is accumulated for it in the coin receptacle section 40.

[0041] Moreover, ****** 41 for taking out the sound emitted from the loudspeaker 42 (refer to drawing 5 ) contained inside the case 12 to the exterior of a case 12 is formed in this coin receptacle section 40 bottom. Various kinds of binaural sounds are emitted and various kinds of binaural sounds are used for the voice relevant to a sound effect and a pattern etc. so that this loudspeaker 42 may be mentioned later.

[0042] each of the reels 26L, 26C, and 26R mentioned above — a peripheral face — the number of predetermined in the picture of two or more kinds of patterns — for example, 21 pieces are drawn at a time The code number of "0" - "20" is given to each of these patterns, and the relation between the picture of a pattern and a code number is memorized by ROM108 later mentioned as a data table.

[0043] An example of a data table is shown in drawing 2 . In addition, in the data table shown in this drawing 2 , it is what simplified the kind of pattern and was expressed with the sign of "A" - "H", for example, "A" is a sign which shows "7" of a pattern, and "C" is a sign which shows the "cherry" of a pattern. The pattern corresponding to the code number is drawn on each peripheral face of Reels 26L, 26C, and 26R by code numerical order of a data table. Thereby, the kind of pattern can be specified if a reel and a code number become settled. For example, the pattern of the code number 16 in reel 26R is "C."

[0044] This data table is used in case each angle-of-rotation position of Reels 26L, 26C, and 26R and the picture of a pattern are matched so that it may mention later. For example, by referring to the data table shown in drawing 2 based on the information on each angle-of-rotation position of Reels 26L, 26C, and 26R, when Reels 26L, 26C, and 26R stop The picture of the pattern by which it is indicated by halt can be specified on the winning-a-prize line L1 of display windows 14L, 14C, and 14R, L2A, L2B, L3A, and L3B.

[0045] Moreover, ROM108 mentioned above also memorizes the winning-a-prize pattern combination table showing the dividend number of sheets of coin and the relation of ** which are paid out when it becomes the combination and the combination of a pattern of the pattern which wins a prize as a hit. An example of this winning-a-prize pattern combination table is shown in drawing 3 . in addition . It is that whose drawing 3 of this also simplified the kind of pattern and expressed it with the sign of "A" - "H", for example, A is a sign which shows "7" of a pattern, and C is a sign which shows the "cherry" of a pattern. [ as well as drawing 2 ]

[0046] for example, the combination of the pattern which this winning-a-prize pattern combination table was referred to, and was stopped on the effective line when all the three reels 26L, 26C, and 26R stopped -- for example, "A"-"A"- when it is "A", predetermined number of sheets, for example, 15 coin, will pay out Moreover, this winning-a-prize pattern combination table is referred to when it is not only referred to, but [ when all the three reels 26L, 26C, and 26R stop ] reel 26L and reel 26C stop so that it may mention later.

[0047] In addition, the winning-a-prize pattern combination table shown in drawing 3 mentioned above is usually a thing at the time in a game state, and the winning-a-prize pattern combination table for bonus games which is not illustrated is referred to in the big bonus game and regular bonus game which are a game in a state advantageous to a game person.

[0048] The game state in a slot game is explained in the following. The game state in a slot game usually has three kinds, the game in a game state, the game (RB game is called hereafter) in a regular bonus state, and the game (BB game is called hereafter) in a big bonus state, and it usually shifts to the game in "a state advantageous to a game person" from the game in a game state so that it may be a game in "a state advantageous to a game person" and RB game and BB game may be mentioned later

[0049] Usually, when game **** in a game state becomes a combination predetermined in the combination of the pattern by which it was indicated by halt on the effective line, For example, "watermelon" - "Watermelon" - A "watermelon" and "bell" [ - "Bell" ] [ - The coin of predetermined number of sheets pays out a game person, and 1 time of a game is ended noting that a prize of a small hit is won, when it becomes the combination of a "bell" etc. ]

[0050] Moreover, "JAC" when it becomes the combination of another pattern on an effective line - "JAC" - When it becomes combination, such as "JAC", it becomes the so-called replay and the so-called re-game which can perform a game at once again, without supplying coin. Furthermore, it becomes a "blank" in corresponding to neither of the combination of the winning-a-prize pattern combination table shown on the effective line at drawing 3 .

[0051] Furthermore, it is the pattern "7" of the same color again. - "7" - If a halt indication of the combination of patterns, such as "7", is given on an effective line, after the coin of predetermined number of sheets pays out, it will shift to BB game mentioned later.

[0052] Moreover, "BOMB" - "BOMB" - If a halt indication of the combination of patterns, such as "7", is given on an effective line, after the coin of predetermined number of sheets pays out, it will shift to RB game mentioned later.

[0053] RB game mentioned above is "BOMB"-"BOMB" in a game [ in / a game state / usually / as mentioned above ]. - It is the game performed when the combination of patterns, such as "7", is located in a line on an effective line. In this RB game, the game of the one coin credit called a jack game can be performed two or more times. It sets in this jack game and is "JAC" on the effective line L1. - "JAC" - Predetermined number of sheets, for example, eight coin, pays out noting that a prize of a jack game will be won, if the combination of "JAC" is located in a line. Although a "blank" is generated in a jack game, about 9/of jack game winning a prize is generated in the high probability 10. It will end, if the number of jack games of the total which for example, jack game winning a prize occurred 8 times, or was performed in RB game amounts to 12 times, and this RB game usually returns to the game of a game state.

[0054] That from which the game by which BB game mentioned above is called RB game and a general game became a lot may be performed two or more times. When it shifts to BB game, a general game is performed first. It is [ - "Watermelon" / - The small hit by the combination of a "watermelon" etc. usually occurs in high probability compared with the game in a game state mentioned above ] "7" although a "blank" is generated in the general game in this BB game. - "7" - "7" "Watermelon" Furthermore, in the general game in this BB game, the small hit by the combination of the pattern which is not generated may also usually be generated in the game in a game state.

[0055] It sets to the general game in BB game, and is "JAC". - "JAC" - If the combination of "JAC" is located in a line, after the coin of predetermined number of

sheets pays out, it will shift to RB game which can perform the jack game of multiple times. If the number of jack games of the total which for example, jack game winning a prize occurred 8 times, or was performed in RB game amounts to 12 times, set [ 1st ] BB game will end BB game.

[0056] After 1st RB game is completed, the general game in BB game mentioned above is performed again, and it is "JAC" in this general game. - "JAC" - Generating of the combination of "JAC" performs RB game again mentioned above after that.

[0057] BB game is a game of the repeat which made the general game and RB game 1 set, if 1 set of these games are performed twice the number of predetermined times, for example, they will end BB game, and it usually returns to the game of a game state. However, into this BB game, when the number of times of a total game in a general game state exceeds the number of times of predetermined, for example, 30 times, it ends and BB game returns to normal at the game of a game state.

[0058] The state where the front door 50 of a slot machine 10 was opened to left-hand side is shown in drawing 4 .

[0059] After counting of the coin which the coin counter 52 and the coin passage sensor 54 are formed behind the coin slot 31 mentioned above, and was thrown in from the coin slot 31 is carried out by the coin counter 52 and it is detected by the coin passage sensor 54, it passes chute 56, rolls the slope 60 established in the hopper 58 inside, and is contained in a hopper 58.

[0060] The coin passage sensor 54 mentioned above emits a coin detecting signal, when it detects that coin passed. This coin detecting signal is a signal which shows that coin was thrown in. By distinguishing whether this coin detecting signal was emitted, it can distinguish having resulted in the state which can be game started.

[0061] The block diagram showing the circuitry containing the control circuit which controls a slot machine 10, and the peripheral device electrically connected to this is shown in drawing 5 .

[0062] The start lever 32 mentioned above is connected to the interface-circuitry group 102 of a control circuit 100, and the interface-circuitry group 102 is connected to the input/output bus 104. After the starting start signal emitted from the start lever 32 is changed into a desired signal in the interface-circuitry group 102, it is supplied to an input/output bus 104. The input/output bus 104 is made as [ input / output and / a data signal or an address signal / by the central-process circuit (CPU is called hereafter) 106 ].

[0063] Moreover, earth switches 34L, 34C, and 34R, the 1-BET switch 20, the 2-BET switch 22, the maximum BET switch 24, and the expenditure button 36 are also connected to the interface-circuitry group 102 mentioned above. After the signal emitted from these buttons and switches is also supplied to the interface-circuitry group 102 and is changed into a desired signal, an input/output bus 104 is supplied.

[0064] Furthermore, the coin counter 52 and the coin passage sensor 54 are also connected to the interface-circuitry group 102. The signal emitted from these

counters and sensors is also supplied to the interface-circuitry group 102, and after being changed into the signal considered as a request, an input/output bus 104 is supplied.

[0065] ROM (read-only memory)108 and RAM (random access memory)110 are connected to the input/output bus 104 mentioned above. ROM108 memorizes the control program which controls the flow of the whole slot machine. Furthermore, alphabetic datas, such as an initial data for performing a control program and a message displayed in display 30, and the voice data for the voice uttered from a loudspeaker 42 also memorize ROM108. Furthermore, the data table shown in drawing 2 mentioned above, the winning-a-prize pattern combination table shown in drawing 3 , and the winning-a-prize probability table mentioned later are also memorized.

[0066] Moreover, RAM110 memorizes temporarily the value of the flag used with the control program mentioned above, or a variable.

[0067] The random number generator 112 for generating a random number is also formed in the input/output bus 104. A random number generator 112 generates the numeric value of the fixed range, for example, the random number contained in 0-65535 (16th power of 2). In addition, you may constitute a random number so that it may emit by data processing of CPU106.

[0068] The motorised circuit 114 is connected to the input/output bus 104. The stepping motors 62L, 62C, and 62R which carry out the rotation drive of each of three reels 26L, 26C, and 26R mentioned above are connected to the motorised circuit 114. Each of stepping motors 62L, 62C, and 62R is prepared in the interior of three reels 26L, 26C, and 26R, and Reels 26L, 26C, and 26R are formed in stepping motors 62L, 62C, and 62R so that the rotation shaft of stepping motors 62L, 62C, and 62R may serve as the center of rotation of Reels 26L, 26C, and 26R.

[0069] The drive control instruction emitted from CPU106 is changed into a driving signal by the motorised circuit 114, and a driving signal is supplied to stepping motors 62L, 62C, and 62R. In addition, while the instruction of rotational speed is also included in drive control instruction and performing the roll control of stepping motors 62L, 62C, and 62R, and halt control, control of rotational speed is also performed.

[0070] CPU106 can control rotational speed, while performing the roll control of Reels 26L, 26C, and 26R, and halt control by carrying out control to **** and the stepping motors 62L, 62C, and 62R which were mentioned above.

[0071] The angle-of-rotation position sensor (not shown) for detecting the angle-of-rotation position of each reel is formed in each of Reels 26L, 26C, and 26R, and the angle-of-rotation position sensor is connected to the reel angle-of-rotation position detector 116. When the signal which shows each angle-of-rotation position of Reels 26L, 26C, and 26R is emitted from an angle-of-rotation position sensor, after the reel angle-of-rotation position detector 116 is supplied and being changed into a predetermined signal, an input/output bus 104 is supplied.

[0072] CPU106 can specify the picture of the pattern displayed on each of display windows 14L, 14C, and 14R by computing the code number of a pattern from the supplied angle-of-rotation position, and referring to the data table shown in drawing 2 .

[0073] The lamp drive circuit 118 for driving the effective line display lamp 44 is also connected to the input/output bus 104, and CPU106 emits drive instructions in the lamp drive circuit 118 according to the signal emitted from the 1-BET switch 20, the 2-BET switch 22, or the maximum BET switch 24, and carries out the lighting drive of the effective line display lamp 44 according to drive instructions.

[0074] Moreover, the display driving gear 120 which drives display 30 is also connected to the input/output bus 104, and CPU106 reads image data, an alphabetic data, etc. which are memorized by ROM108, and supplies the data to the display driving gear 120. From doing in this way, image data is displayed on display 30 as a production screen, or an alphabetic data is displayed on it as a message.

[0075] Furthermore, the loudspeaker drive circuit 122 for driving a loudspeaker 42 is also connected to the input/output bus 104, and CPU106 reads the voice data memorized by ROM108, and supplies the data to the loudspeaker drive circuit 122. Predetermined voice is uttered from a loudspeaker 42 from doing in this way.

[0076] Moreover, this loudspeaker 42 utters the voice which expresses two or more patterns by which a change display or a halt indication is given to display windows 14L, 14C, and 14R, as mentioned above. The voice which the voice data for expressing two or more patterns is recorded on ROM108, and is uttered based on the voice data is identifiable in acoustic sense, for example, the sound pressure of voice data and frequency differ from at least one element of a tone.

[0077] As mentioned above, CPU106 from each angle-of-rotation position of the reels 26L, 26C, and 26R detected by the angle-of-rotation position sensor Specify the picture of the pattern by which a change display or a halt indication is given as display windows 14L, 14C, and 14R, read the voice data corresponding to the picture of the pattern from ROM108, and an input/output bus 104 and the loudspeaker drive circuit 122 are minded. The voice corresponding to the picture of the pattern by which a change display or a halt indication is given at display windows 14L, 14C, and 14R at a loudspeaker 42 is generated.

[0078] Furthermore, the loudspeaker 42 of this operation form is a "parametric loudspeaker" of a couple, does not emit a binaural sound and also acts as the ** student of the virtual source which generates voice in false from the position where a loudspeaker 42 does not exist again. In addition, the technology generally known as technology of generating this virtual source by JP,2001-29542,A mentioned above, for example can be used.

[0079] In order that such a binaural sound may make a game person sense the depth perception and the feeling of movement which are the property, and a feeling of the normal position, it expresses each of nine patterns by which a change display or a halt indication is given as voice uttered from nine different directions to display

windows 14L, 14C, and 14R, and makes it identifiable in acoustic sense.
[0080] Furthermore, the voice uttered again based on the voice data mentioned above is uttered then identifiable with the case where a halt indication of the pattern is given, and the case where a change indication of the pattern is given. By the case where a halt indication of the pattern is given, to predetermined timing, voice repeats ON/OFF, is uttered, and by the case where a change indication of the pattern is given, it is uttered so that it may be made to correspond to the position which a pattern moves and may move while ON/OFF is repeated to timing shorter than the predetermined timing mentioned above.
[0081] In addition, although the voice in which the pattern by which prepares the "parametric loudspeaker" which acts as the ** student of the virtual source, and a change display or a halt indication is given at display windows 14L, 14C, and 14R carries out picture expression is uttered with this operation form, the loudspeaker which adopted the "stereo dipole method" which may use the loudspeaker of another method and acts as the ** student of the virtual source is sufficient. Moreover, two or more loudspeakers may be prepared and a binaural sound may be emitted. Furthermore, even if it does not emit a binaural sound, if the voice which teaches the kind of identification information picture by which a change display or a halt indication is given is uttered by display windows 14L, 14C, and 14R, it is satisfactory again.
[0082] The slot machine 10 is started beforehand below, and the variable used in CPU106 mentioned above shall be initialized by the predetermined value, and shall carry out regular operation.
[0083] The sub routine which carries out drive control of the slot machine performed in the control circuit 100 mentioned above is shown in drawing 6 . In addition, this sub routine is called and performed from the main program of the slot machine 10 currently performed beforehand to predetermined timing.
[0084] First, it judges whether the coin of a predetermined number was thrown in from the coin slot 31 (Step S11). When coin was not thrown in from a coin slot 31 and it distinguishes, this sub routine is terminated immediately.
[0085] On the other hand, when it distinguishes that coin was thrown in from the coin slot 31, it judges whether push operation of either the 1-BET switch 20, the 2-BET switch 22 or the maximum BET switch 24 was carried out (Step S12). When push operation of neither of the BET switches was carried out and it distinguishes, this sub routine is terminated immediately.
[0086] When it distinguishes that push operation of either the 1-BET switch 20, the 2-BET switch 22 or the maximum BET switch 24 was carried out, it judges whether push operation of the start lever 32 was carried out (Step S13). When push operation of the start lever 32 was not carried out and it distinguishes, this sub routine is terminated immediately.
[0087] In addition, by carrying out push operation of either the 1-BET switch 20, the 2-BET switch 22 or the maximum BET switch 24, it becomes settled any of five

winning-a-prize lines L1, L2A, L2B, L3A, and the L3B are made into an effective line, and it carries out the lighting drive of the corresponding effective line display lamp 44. Moreover, when it distinguishes that push operation of either the 1-BET switch 20, the 2-BET switch 22 or the maximum BET switch 24 was carried out by processing of Step S12 and this sub routine is again called since that is recorded, at Step S12, it is distinguished that push operation of each BET switch was carried out.

[0088] When it distinguishes that push operation of the start lever 32 was carried out, internal lottery processing is performed according to the random number which sent the instruction which emits a random number to a random number generator 112, was made to generate a random number, and was generated (Step S14).

[0089] ROM108 mentioned above has also memorized the winning-a-prize probability table, and internal lottery processing of Step S14 defines a winning-a-prize mode based on the value of the generated random number. The winning-a-prize mode set to below by internal lottery processing is called a lottery winning-a-prize mode.

[0090] An example of the winning-a-prize probability table mentioned above is shown in drawing 7 . A winning-a-prize probability table memorizes the data which divide the random number generated with the random number generator 112 to each of a winning-a-prize mode. In addition, the example shown in drawing 7 is usually a thing at the time in a game state, and when a regular bonus game and a big bonus game are performed, the winning-a-prize probability table for bonus games which is not illustrated is used. a1-a3 which were shown in drawing 7 , b1-b3, c1-c3, d1-d3, e1-e3, f1-f3, g1-g3, and h1-h3 are numeric data set up beforehand, and in case they divide the random number generated with the random number generator 112 in each winning-a-prize mode, they are used.

[0091] When there is a number of sheets of the thrown-in coin, the numeric value of "a1-g1" is used, when it is two sheets, the numeric value of "a2-g2" is used, and when it is three sheets, the numeric value of "a3-g3" is used. In addition, the example shown in drawing 7 shows the range of the concrete numeric value of a3-g3 which are used when there is three number of sheets of the thrown-in coin, and the value of a random number, and the concrete numeric value is defined also about a1-g1, and a2-g2.

[0092] The relation of these numeric values is usually set as the size relation "a3<b3<c3<d3<e3<f3<g3" 3 [ "a1<b1<c1<d1<e1<f1<g1", "a2<b2<c2<d2<e2<f2<g2", and ] Unrelated. "BB" success-in-an-election flag stands noting that a prize of great success will be won, if the values of the random number generated with the random number generator 112 are a1, a2, and less than [ a2 ]. moreover, the value of a random number -- less than [ more than a1b1 ], less than [ more than a2b2 ], and a -- "RB" success-in-an-election flag stands noting that it comes out, and a prize of per inside will be won less than [ three or more b ] three, if it is In addition, "BB" mentioned above is an abbreviation which shows a big bonus, and "RB" is an abbreviation which shows a regular bonus.

[0093] The value of a random number Moreover, less than [ more than b1c1 ], less than [ more than b2c2 ], and less than [ more than b3c3 ], A "watermelon" success-in-an-election flag stands on a ** case. Less than [ more than c1d1 ] and less than [ more than c2d2 ], In less than [ c / two or more d ] 2**, a "bell" success-in-an-election flag and less than [ more than d1e1 ], In less than [ more than d2e2 ] and less than [ d / three or more e ] 3**, in "four-sheet cherry" success-in-an-election flag, less than [ more than e1f1 ], less than [ more than e2f2 ], and less than [ e / three or more f ] 3**, a "two-sheet cherry" success-in-an-election flag stands. furthermore, less than [ more than f1g1 ], less than [ more than f2g2 ], and f -- if it comes out less than [ three or more g ] three and is -- a "re-game" success-in-an-election flag -- standing -- more than g1, more than g2, and g -- three or more, it comes out, and if it is, a "blank" success-in-an-election flag without winning a prize will stand

[0094] When there is specifically three number of sheets of the coin thrown in in the example shown in drawing 7 , "RB" success-in-an-election flag stands noting that a prize of per inside is won, when "BB" success-in-an-election flag stands and the value of a random number belongs to the range of 201-380 noting that a prize of great success is won, when the value of the random number generated with the random number generator 112 belongs to the range of 0-200. A "watermelon" success-in-an-election flag, a "bell" success-in-an-election flag, a "four-sheet cherry" success-in-an-election flag, and a "two-sheet cherry" success-in-an-election flag stand noting that similarly a prize of a small hit is won, when the value of a random number belongs to the range of 381-10000. Furthermore, when the value of a random number belongs to the range of 10001-18000, a "re-game" success-in-an-election flag stands, and when the value of a random number belongs to the range of 18001-65535, a "blank" success-in-an-election flag stands.

[0095] As mentioned above, a lottery winning-a-prize mode is defined by the numerical range to which the value of the random number generated with the random number generator 112 belongs, and is expressed by the success-in-an-election flag. The kind of success-in-an-election flag is eight kinds, a "blank", a "re-game", a "two-sheet cherry", a "four-sheet cherry", a "bell", a "watermelon", "RB", and "BB", and the success-in-an-election flag corresponding to the winning-a-prize mode which cast lots by internal lottery processing of Step S14 is memorized to the predetermined field of RAM110.

[0096] Moreover, without being extremely influenced by a game person's skill, since it generates under the probability according to a data setup of a winning-a-prize probability table, the lottery winning-a-prize mode can maintain the total-rate of coin payment within the business hours on the 1st, for example, so that it may become almost fixed.

[0097] After performing internal lottery processing of Step S14 mentioned above, reel roll control processing is performed (Step S15). In this processing, CPU106 emits drive control instruction in the motorised circuit 114 through an input/output

bus 104, and the motorised circuit 114 which received the drive control instruction supplies a driving signal to stepping motors 62L, 62C, and 62R. The stepping motors 62L, 62C, and 62R which received the driving signal control rotational speed while performing the roll control of Reels 26L, 26C, and 26R, and halt control. By this, the pattern drawn on each peripheral face of Reels 26L, 26C, and 26R indicates by change. After this processing is completed, processing is moved to Step S16.

[0098] Subsequently, reel position detection processing is performed (Step S16). In this processing, after the reel angle-of-rotation position detector 116 which received the signal which shows the angle-of-rotation position emitted from the angle-of-rotation position sensor changes the signal into a predetermined signal, it is supplied to CPU106 through an input/output bus 104. CPU106 which received the **** signal mentioned above detects the angle-of-rotation position of Reels 26L, 26C, and 26R based on the signal. After this processing is completed, processing is moved to Step S17.

[0099] Subsequently, reel halt control processing is performed (Step S17). In this processing, when a game person performs press operation of earth switches 34L, 34C, and 34R, CPU106 receives a stop signal through the interface-circuitry group 102 and an input/output bus 104, as mentioned above. That CPU106 which received this signal should stop the reels 26L, 26C, and 26R according to the earth switches 34L, 34C, and 34R, halt control instruction is emitted in the motorised circuit 114 through an input/output bus 104, and the motorised circuit 114 which received the instruction supplies a driving signal to stepping motors 62L, 62C, and 62R. The stepping motors 62L, 62C, and 62R which received the stop signal control rotational speed while performing the roll control of Reels 26L, 26C, and 26R, and halt control. By this, the pattern drawn on each peripheral face of Reels 26L, 26C, and 26R indicates by halt. In addition, the position computed by internal lottery processing of Step S14 is made to suspend the reels 26L, 26C, and 26R to stop. After this processing is completed, processing is moved to Step S18.

[0100] Subsequently, voice generating control processing is performed (Step S18). In this processing, as mentioned above, by referring to the data table shown in drawing 2 from the supplied angle-of-rotation position, CPU106 computes the code number of a pattern and specifies the picture of the pattern displayed on each of display windows 14L, 14C, and 14R. And CPU106 generates voice data based on the picture of the specified pattern, and supplies voice data to the loudspeaker drive circuit 122 through an input/output bus 104 so that it may mention later. The loudspeaker drive circuit 122 which received voice data performs data conversion, and supplies a sound signal to a loudspeaker 42. The voice which shows by this the picture of the pattern displayed on each of display windows 14L, 14C, and 14R is uttered from a loudspeaker 42. After this processing is completed, processing is moved to Step S19.

[0101] Subsequently, at Step S19, it judges whether all the reels 26L, 26C, and 26R were suspended. When it was distinguished that all the reels 26L, 26C, and 26R were suspended, processing was moved to Step S20, all the reels 26L, 26C, and 26R were

not suspended and it is distinguished, processing is again moved to Step S16.
[0102] Subsequently, medal expenditure processing is performed (Step S20). In this processing, the winning-a-prize pattern combination table which the combination of the pattern located in a line on the effective line showed to drawing 3 is referred to, and processing only whose dividend number of sheets beforehand defined according to the winning-a-prize mode pays out coin is performed. Immediately after this processing is completed, this sub routine is terminated. In addition, this sub routine is terminated immediately, without performing processing to pay out, in not corresponding to the 1 with reference to the winning-a-prize pattern combination table shown in drawing 3 .
[0103] The sub routine of the reel halt control processing called and performed in Step S17 mentioned above is shown in drawing 8 .
[0104] It judges whether push operation of the earth-switch 34L was done by the game person (Step S31). CPU106 moves processing to Step S33, when it distinguished that push operation of the earth-switch 34L was carried out, and processing was moved to Step S32, push operation of the earth-switch 34L was not carried out and it distinguishes.
[0105] Subsequently, the 1st reel halt control processing is performed (Step S32). In this processing, CPU106 computes the code number of a pattern with reference to the data table having obtained the angle-of-rotation position of reel 26L, and having shown it in drawing 2 from the obtained angle-of-rotation position from the signal emitted from the angle-of-rotation position sensor of reel 26L that halt control of the reel 26L should be carried out, and specifies three patterns displayed on display window 14L now.
[0106] When "BB" success-in-an-election flag and "RB" success-in-an-election flag which were mentioned above stand at this time, it judges whether great success and the pattern which constitutes per inside are located on an effective line. Similarly, when the "watermelon" success-in-an-election flag, the "bell" success-in-an-election flag, the "four-sheet cherry" success-in-an-election flag, and the "two-sheet cherry" success-in-an-election flag stand, it judges whether the pattern which constitutes a small hit is located on an effective line. Furthermore, when the "blank" success-in-an-election flag stands, it judges whether the pattern which constitutes a blank is located. When the pattern corresponding to the success-in-an-election flag which stands was located on the effective line and it distinguishes, a stop signal is supplied to stepping motor 62L that halt control of the reel 26L should be carried out immediately. In addition, it is good also as [ rather than a pattern is located on an effective line in consideration of not stopping reel 26L momentarily ] carrying out distinction processing before.
[0107] When rotating only a predetermined angle, for example, when the pattern corresponding to the success-in-an-election flag which stands is not located on the effective line of display window 14L, and only the angle equivalent to a part for four of a pattern rotates reel 26L, it judges what pattern is located on an effective line.

When the pattern corresponding to a success-in-an-election flag exists in this, and the rotation drive of the reel 26L is carried out and it is located on an effective line until the pattern was located on the effective line, a stop signal is supplied to stepping motor 62L that halt control of the reel 26L should be carried out. After this processing is completed, processing is moved to Step S33.

[0108] Next, it judges whether push operation of the earth-switch 34C was done by the game person (Step S33). CPU106 performs the following control processings that processing is moved to Step S35 when push operation of the earth-switch 34C was not carried out and it distinguishes, and halt control of the reel 26C should be carried out when it distinguishes that push operation of the earth-switch 34C was carried out (Step S34).

[0109] The winning-a-prize pattern combination table having generated the combination of the code number of the pattern of reel 26L already first stopped on an effective line in the state where reel 26C is rotating, supposing all the patterns of the code numbers 0-20 stopping on the winning-a-prize line L1 of display window 14C, and the code number of the pattern of reel 26C, and having shown it in drawing 3 mentioned above is referred to.

[0110] For example, the example shown in drawing 9 is already stopped by reel 26L, and Reels 26C and 26R are drawings showing the state where rotation operation is carried out. In addition, in the example shown in this drawing 9 , the same sign was attached and shown about the same thing as the element shown in drawing 1 .

[0111] As shown in drawing 9 (a), when reel 26L stops, on display window 14L, a halt indication of the pattern "A" is given in the pattern "C" and the center at a pattern "F" and the bottom. In addition, as mentioned above, the sign of "A", "C", and "F" is a sign for the kind of "7" of a concrete pattern and pattern of a "cherry" etc. being simplified and shown.

[0112] The code number of the pattern of reel 26L, the code number of reel 26C, and the combination of ** serve as ******** shown in drawing 9 (b). The pattern by which a halt indication of the combination shown in the right-hand side of drawing 9 (b) was given at the display window 14L bottom "C", The combination which shows combination with all the patterns of reel 26C, and was shown in the center of drawing 9 (b) The combination which shows the combination of the pattern "F" by which it was indicated by halt, and all the patterns of reel 26C in the center of display window 14L, and was shown in the right-hand side of drawing 9 (b) shows the combination of the pattern "A" by which it was indicated by halt, and all the patterns of reel 26C to the display window 14L bottom.

[0113] Next, winning-a-prize pattern combination and the combination which may become are chosen with reference to the winning-a-prize pattern combination table shown in drawing 3 on five winning-a-prize lines L1, L2A, L2B, L3A, or L3B.

[0114] Drawing 10 (a) shows the combination which may win a prize in the winning-a-prize line L1. the sign of " [ in addition, / - ] which showed reel 26R" -- reel 26R -- yet -- rotational motion -- since it is appearance in the work, it is the sign which

shows an undecided thing As shown in this drawing 10 (a), it sets on the winning-a-prize line L1, and it is "F". - It becomes the combination whose prize the combination of "F" etc. may win.

[0115] Moreover, drawing 10 (b) shows the combination which may win a prize in winning-a-prize line L2A or L3A. It sets to such winning-a-prize line L2A or L3A, and is "C". - It becomes the combination whose prize the combination of "C" etc. may win.

[0116] Furthermore, drawing 10 (c) shows the combination which may win a prize in winning-a-prize line L2B or L3B. It sets to these winning-a-prize line L2Bs or L3B, and is "A". - It becomes the combination whose prize the combination of "A" etc. may win.

[0117] These drawing 10 (a) The combination of the pattern shown in - (c) is memorized to the predetermined field of RAM110. In addition, the example of the combination of the pattern shown in drawing 10 (a) - (c) wins a prize of great success, and when "BB" success-in-an-election flag is stood, such combination is generated according to the success-in-an-election flag defined by internal lottery processing of Step S14 mentioned above.

[0118] In Step S33 mentioned above, when push operation of the earth-switch 34C is done by the game person, the combination of the **** pattern first shown in drawing 10 (a) - (c) mentioned above is generated, and RAM110 memorizes. Subsequently, halt control of stepping motor 62C shown in drawing 3 is performed, referring to the combination of the generated pattern that halt control of the reel 26C should be carried out, in case halt control of the stepping motor 62C is carried out. That is, halt control of stepping motor 62C is performed so that one thing of the combination of the **** pattern shown in drawing 10 (a) - (c) may be realized. After this processing is completed, processing is moved to Step S35.

[0119] Next, it judges whether push operation of the earth-switch 34R was done by the game person (Step S35). The following control processings are performed that CPU106 moves processing to Step S37 when push operation of the earth-switch 34R was not carried out and it distinguishes, and reel 26R should be stopped when it distinguishes that push operation of the earth-switch 34R was carried out (Step S36).

[0120] In this halt control processing, the combination of the pattern which reel 26L and reel 26C already stopped, and has been stopped on an effective line by processing mentioned above is specified, and halt control of stepping motor 62R is performed, referring to the **** table shown in drawing 10 mentioned above.

[0121] That is, referring to the **** table shown in drawing 10 mentioned above, stepping motor 62R is controlled so that a halt indication of the pattern which the combination of the pattern corresponding to a success-in-an-election flag realizes is given on an effective line.

[0122] When a success-in-an-election flag is a "blank" by carrying out halt control processing of Steps S31-S36 mentioned above, halt control of the stepping motors

62L, 62C, and 62R is carried out so that the combination of the pattern of the winning-a-prize mode of a hit may not gather on which effective line.
[0123] Moreover, when a success-in-an-election flag is a "two-sheet cherry", halt control of the stepping motors 62L, 62C, and 62R is carried out so that the combination of the "cherry" of a pattern may gather on one of effective lines.
[0124] Furthermore, when a success-in-an-election flag is a "four-sheet cherry", halt control of the stepping motors 62L, 62C, and 62R is carried out so that the combination of a pattern "a cherry" may gather on two effective lines, respectively.
[0125] Furthermore, when success-in-an-election flags are a "bell" and a "watermelon", halt control of the stepping motors 62L, 62C, and 62R is carried out again so that the "bell" of a pattern or the combination of a "watermelon" may gather on one of effective lines.
[0126] Moreover, when success-in-an-election flags are "RB" and "BB", halt control of the stepping motors 62L, 62C, and 62R is carried out so that the combination of "7" of a pattern or a predetermined pattern may gather on one of effective lines.
[0127] By performing halt control of the **** stepping motors 62L, 62C, and 62R mentioned above, the combination of a pattern can be indicated by halt on an effective line so that it may become the lottery winning-a-prize mode defined by internal lottery processing of Step S14.
[0128] The sub routine of the voice generating control processing called and performed in Step S18 mentioned above is shown in drawing 11 .
[0129] It judges whether introduction and 1st reel 26L received halt control processing. (Step S51) . When it distinguished that 1st reel 26L received halt control processing, and processing was moved to Step S52, 1st reel 26L had not received halt control processing and it distinguishes, processing is moved to Step S53.
[0130] In processing of Step S52, the 1st reel halt pattern voice data is generated. As mentioned above, CPU106 detects three patterns by which it is indicated by halt from the angle-of-rotation position of 1st reel 26L to display window 14L, and generates the halt pattern voice data which shows the combination of the detected pattern. This halt pattern voice data is recorded on ROM108, and consists of 20 voice data. Each of this voice data makes display window 14L compound three voice data which shows the pattern by which it may be indicated by halt. As mentioned above, CPU106 reads one of the halt pattern voice data, and records it on RAM110.
[0131] furthermore, in processing of Step S61 mentioned later, when reproduced, this halt pattern voice data again It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by halt was uttered from the upper left toward the slot game machine to the display window 14L up side. It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by halt was uttered from the left toward the slot game machine in the center of display window 14L. A game person is made to recognize, as the voice which shows the pattern by which it is

indicated by halt was uttered from the lower left toward the slot game machine to the display window 14L down side. After this processing is completed, processing is moved to Step S54.

[0132] Moreover, in processing of Step S53, the 1st reel change pattern voice data is generated. As mentioned above, CPU106 detects three patterns by which it is indicated by change from the angle-of-rotation position of 1st reel 26L to display window 14L, and generates the change pattern voice data which shows the detected pattern. This change pattern voice data is recorded on ROM108, and consists of 20 voice data. Each of this voice data makes display window 14L compound three voice data which shows the pattern by which it may be indicated by change. As mentioned above, CPU106 reads one of the change pattern voice data, and records it on RAM110.

[0133] furthermore, in processing of Step S61 mentioned later, when reproduced, this change pattern voice data again It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by change was uttered from the upper left toward the slot game machine to the display window 14L up side. It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by change was uttered from the left toward the slot game machine in the center of display window 14L. A game person is made to recognize, as the voice which shows the pattern by which it is indicated by change was uttered from the lower left toward the slot game machine to the display window 14L down side. After this processing is completed, processing is moved to Step S54.

[0134] Subsequently, it judges whether 2nd reel 26C received halt control processing. (Step S54) . When it distinguished that 2nd reel 26C received halt control processing, and processing was moved to Step S55, 2nd reel 26C had not received halt control processing and it distinguishes, processing is moved to Step S56.

[0135] In processing of Step S55, the 2nd reel halt pattern voice data is generated like Step S52 mentioned above. As mentioned above, CPU106 detects three patterns by which it is indicated by halt from the angle-of-rotation position of 2nd reel 26C to display window 14C, and generates the halt pattern voice data which shows the combination of the detected pattern. This halt pattern voice data is recorded on ROM108, and consists of 20 voice data. Each of this voice data makes display window 14C compound three voice data which shows the pattern by which it may be indicated by halt. As mentioned above, CPU106 reads one of the halt pattern voice data, and records it on RAM110.

[0136] furthermore, in processing of Step S61 mentioned later, when reproduced, this halt pattern voice data again It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by halt was uttered from transverse-plane above toward the slot game machine to the display window 14C up side. It becomes the thing which a game person is made to

recognize as the voice which shows the pattern by which it is indicated by halt was uttered from the front toward the slot game machine in the center of display window 14C. A game person is made to recognize, as the voice which shows the pattern by which it is indicated by halt was uttered from transverse-plane down toward the slot game machine to the display window 14C down side. After this processing is completed, processing is moved to Step S57.

[0137] Moreover, in processing of Step S56, the 2nd reel change pattern voice data is generated like Step S53 mentioned above. As mentioned above, CPU106 detects three patterns by which it is indicated by change from the angle-of-rotation position of 2nd reel 26C to display window 14C, and generates the change pattern voice data which shows the detected pattern. This change pattern voice data is recorded on ROM108, and consists of 20 voice data. Each of this voice data makes display window 14C compound three voice data which shows the pattern by which it may be indicated by change. As mentioned above, CPU106 reads one of the change pattern voice data, and records it on RAM110.

[0138] furthermore, in processing of Step S61 mentioned later, when reproduced, this change pattern voice data again It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by change was uttered from transverse-plane above toward the slot game machine to the display window 14C up side. It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by change was uttered from the front toward the slot game machine in the center of display window 14C. A game person is made to recognize, as the voice which shows the pattern by which it is indicated by change was uttered from transverse-plane down toward the slot game machine to the display window 14C down side. After this processing is completed, processing is moved to Step S57.

[0139] Subsequently, it judges whether 3rd reel 26R received halt control processing. (Step S57) . When it distinguished that 3rd reel 26R received halt control processing, and processing was moved to Step S58, 3rd reel 26R had not received halt control processing and it distinguishes, processing is moved to Step S59.

[0140] In processing of Step S58, the 3rd reel halt pattern voice data is generated like Step S52 and Step S55 which were mentioned above. As mentioned above, CPU106 detects three patterns by which it is indicated by halt from the angle-of-rotation position of 3rd reel 26R to display window 14R, and generates the halt pattern voice data which shows the combination of the detected pattern. This halt pattern voice data is recorded on ROM108, and consists of 20 voice data. Each of this voice data makes display window 14R compound three voice data which shows the pattern by which it may be indicated by halt. As mentioned above, CPU106 reads one of the halt pattern voice data, and records it on RAM110.

[0141] furthermore, in processing of Step S61 mentioned later, when reproduced, this halt pattern voice data again It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by halt

was uttered from the upper right toward the slot game machine to the display window 14R up side. It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by halt was uttered from the right toward the slot game machine in the center of display window 14R. A game person is made to recognize, as the voice which shows the pattern by which it is indicated by halt was uttered from the lower right toward the slot game machine to the display window 14R down side. After this processing is completed, processing is moved to Step S60.

[0142] Moreover, in processing of Step S59, the 3rd reel change pattern voice data is generated like Step S53 and Step S56 which were mentioned above. As mentioned above, CPU106 detects three patterns by which it is indicated by change from the angle-of-rotation position of 3rd reel 26R to display window 14R, and generates the change pattern voice data which shows the detected pattern. This change pattern voice data is recorded on ROM108, and consists of 20 voice data. Each of this voice data makes display window 14R compound three voice data which shows the pattern by which it may be indicated by change. CPU106 reads each of the change pattern voice data compounded as mentioned above, and records it on RAM110.

[0143] furthermore, in processing of Step S61 mentioned later, when reproduced, this change pattern voice data again It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by change was uttered from the upper right toward the slot game machine to the display window 14R up side. It becomes the thing which a game person is made to recognize as the voice which shows the pattern by which it is indicated by change was uttered from the right toward the slot game machine in the center of display window 14R. A game person is made to recognize, as the voice which shows the pattern by which it is indicated by change was uttered from the lower right toward the slot game machine to the display window 14R down side. After this processing is completed, processing is moved to Step S60.

[0144] Subsequently, voice data composition processing is performed (Step S60). In this processing, as mentioned above, CPU106 is compounded so that it may correspond at each of the loudspeaker 42 of right and left of the image data of the pattern which was recorded on RAM110 and by which a change display or a halt indication was given at display windows 14L, 14C, and 14R, and is recorded on RAM110. After this processing is completed, processing is moved to Step S61.

[0145] Subsequently, synthesized-speech data regeneration is performed (Step S61). In this processing, CPU106 supplies the voice data compounded at Step S60 to the loudspeaker drive circuit 122 through an input/output bus 104. The loudspeaker drive circuit 122 which received voice data changes this voice data into a predetermined signal, and supplies the predetermined signal to a loudspeaker 42. By this, the voice based on the picture of the pattern by which a change display or a halt indication is given will be uttered by display windows 14L, 14C, and 14R from a

loudspeaker 42, and a game person will recognize the voice based on the picture of the pattern in acoustic sense from a direction different, respectively.
[0146] It has the speech generation device which utters the voice concerning the situation of the aforementioned game. Step S51 to Step S16 and the step S61 which were mentioned above are processed, "the speech generation device concerned [ that the voice which teaches the kind of identification information picture by which a change display or a halt indication is given to the aforementioned display is uttered"'s, and ] Since a game person can discriminate an identification information picture only by the acoustic sense based on the voice, the burden to a visual sense is mitigated and possibility of making a game person enjoying a game for a long time becomes high. Moreover, a game may be made to perform, without a visually handicapped person's also being able to perform a game now and choosing a game person.
[0147] Moreover, the thing for which Step S51 to Step S16 and the step S61 which were mentioned above are processed, "the aforementioned voice [ that the effect of the binaural sound which it may be made to be heard from the position which a game person has arises"'s, and ] Since possibility that a game person will take in the depth perception to the voice, a feeling of movement, and a feeling of the normal position increases, Even if a game person is not conscious, unnecessary voice is eliminated, only required voice is made easy to catch, namely, possibility of causing the cocktail party effect increases, and a game can be performed, without caring about the voice from other game machines. Moreover, the presence and the three-dimensional sound field which have not been felt at the time of monophonic reproduction and stereo reproduction can be made, the width of face of production is expanded, and possibility of making a game person's interest continuing indefinitely is raised. When [ which is made like ] making a game person discriminate the kind of identification information picture especially, states, such as a position of an identification information picture and depth, its change display, or a halt display, can be directed with reality by adopting the binaural sound mentioned above.
[0148] Furthermore, since a game person may be made to discriminate at a game person by making into a binaural sound voice which makes the kind of identification information picture identifiable since the aforementioned speech generation device makes a virtual source by processing Step S51 to Step S16 and the step S61 which were mentioned above again, without actually having a sound source behind a game person etc., ** space-ization in a game machine is realizable.
[0149] Furthermore, in the operation form mentioned above, while carrying out [ voice / which was uttered from the slot game machine which adjoined by acting as the ** student of the virtual source ] a mask, although voice uttered from the slot game machine of self was made easy to recognize in acoustic sense, again Since [ which is not things ] a mask is carried out [ voice / by which the voice uttered from the slot game machine of self was uttered from the "it was prepared in back meeting" slot game machine ] as by adjusting the sweet spot of the voice suitably

shows to drawing 12 , Without carrying out big design changes, such as a slot game machine and an amusement center, the burden to a visual sense is mitigated and combined and possibility of making a game person enjoying a game for a long time becomes high.
[0150] Moreover, in the operation gestalt mentioned above, although voice was uttered only with the slot game machine, you may generate voice by transmission and reception with the **** server 80 shown in drawing 13 .
[0151] Furthermore, in the operation gestalt mentioned above, although the identification information picture slack pattern was change-displayed or halt displayed using the reel object, you may change-display or halt display a pattern again using display, such as a liquid crystal panel. Furthermore, although the slot game machine was described in the operation gestalt mentioned above again, not only this but the conventional pachinko game machine is sufficient as this invention.
[0152]
[Effect of the Invention] According to this invention, it is "have the speech generation device which utters the voice concerning the situation of the aforementioned game, and the speech generation device concerned utters the voice which teaches the kind of identification information picture by which a change display or a halt indication is given to the aforementioned display", and since a game person can discriminate an identification information picture only by the acoustic sense based on the voice, the burden to a visual sense is mitigated and possibility make a game person enjoy a game for a long time becomes high. Moreover, a game may be made to perform, without a visually handicapped person's also being able to perform a game now and choosing a game person.

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[Translation done.]

* NOTICES *

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2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]
[Drawing 1] It is the perspective diagram showing the appearance of the slot game

machine by this invention.
[Drawing 2] It is explanatory drawing showing each data of a slot game machine.
[Drawing 3] It is explanatory drawing showing each data of a slot game machine.
[Drawing 4] It is drawing of longitudinal section showing a slot game machine.
[Drawing 5] It is the block diagram showing the electric composition of a slot game machine.
[Drawing 6] It is drawing showing the flow chart of the control method of a slot game machine.
[Drawing 7] It is explanatory drawing showing each data of a slot game machine.
[Drawing 8] It is drawing showing the flow chart of the control method of a slot game machine.
[Drawing 9] It is explanatory drawing showing each data of a slot game machine.
[Drawing 10] It is explanatory drawing showing each data of a slot game machine.
[Drawing 11] It is drawing showing the flow chart of the control method of a slot game machine.
[Drawing 12] It is explanatory drawing showing a slot game machine.
[Drawing 13] It is drawing showing the outline at the time of considering as the composition to which the server and the slot game machine were connected through the network.
[Description of Notations]
10 Slot Machine
14L, 14C, 14R Display window
26L, 26C, 26R Reel
30 Display
32 Start Lever
34L, 34C, 34R Earth switch
42 Loudspeaker
62L, 62C, 62R Stepping motor
80 Server
100 Control Circuit
102 Interface-Circuitry Group
104 Input/output Bus
112 Random Number Generator
114 Motorised Circuit
116 Reel Angle-of-Rotation Position Detector
118 Lamp Drive Circuit
120 Display Driving Gear
122 Loudspeaker Drive Circuit

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[Translation done.]

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2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

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DRAWINGS

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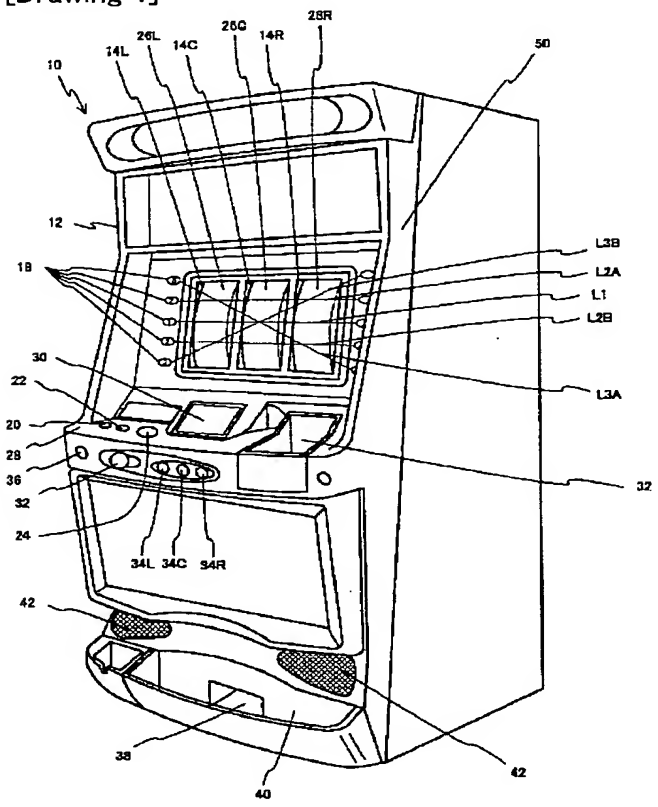
[Drawing 1]




[Drawing 2]

| コード番号 | 第1リール（26L） | 第2リール（26C） | 第3リール（26R） |
|---|---|---|---|
| 0 | A | B | B |
| 1 | G | C | H |
| 2 | F | D | F |
| 3 | C | G | E |
| 4 | F | D | F |
| 5 | A | A | A |
| 6 | D | E | E |
| 7 | C | G | B |
| 8 | G | D | F |
| 9 | F | E | D |
| 10 | C | B | F |
| 11 | F | D | H |
| 12 | A | E | B |
| 13 | E | D | F |
| 14 | C | A | E |
| 15 | F | E | H |
| 16 | B | G | C |
| 17 | F | D | F |
| 18 | C | B | D |
| 19 | E | F | E |
| 20 | F | D | F |

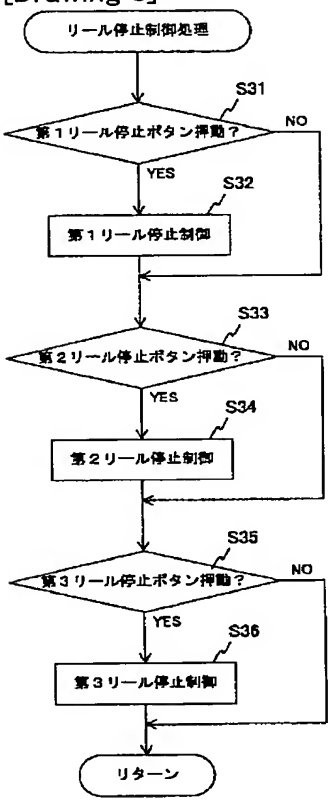
[Drawing 3]

| 第1リール（26L） | 第2リール（26C） | 第3リール（26R） | 配当枚数 |
|---|---|---|---|
| A | A | A | 15 |
| C | C | C | 15 |
| F | F | F | 15 |
| C | C | A | 15 |
| F | F | A | 15 |
| B | B | B | 12 |
| D | D | D | 8 |
| … | … | … | … |

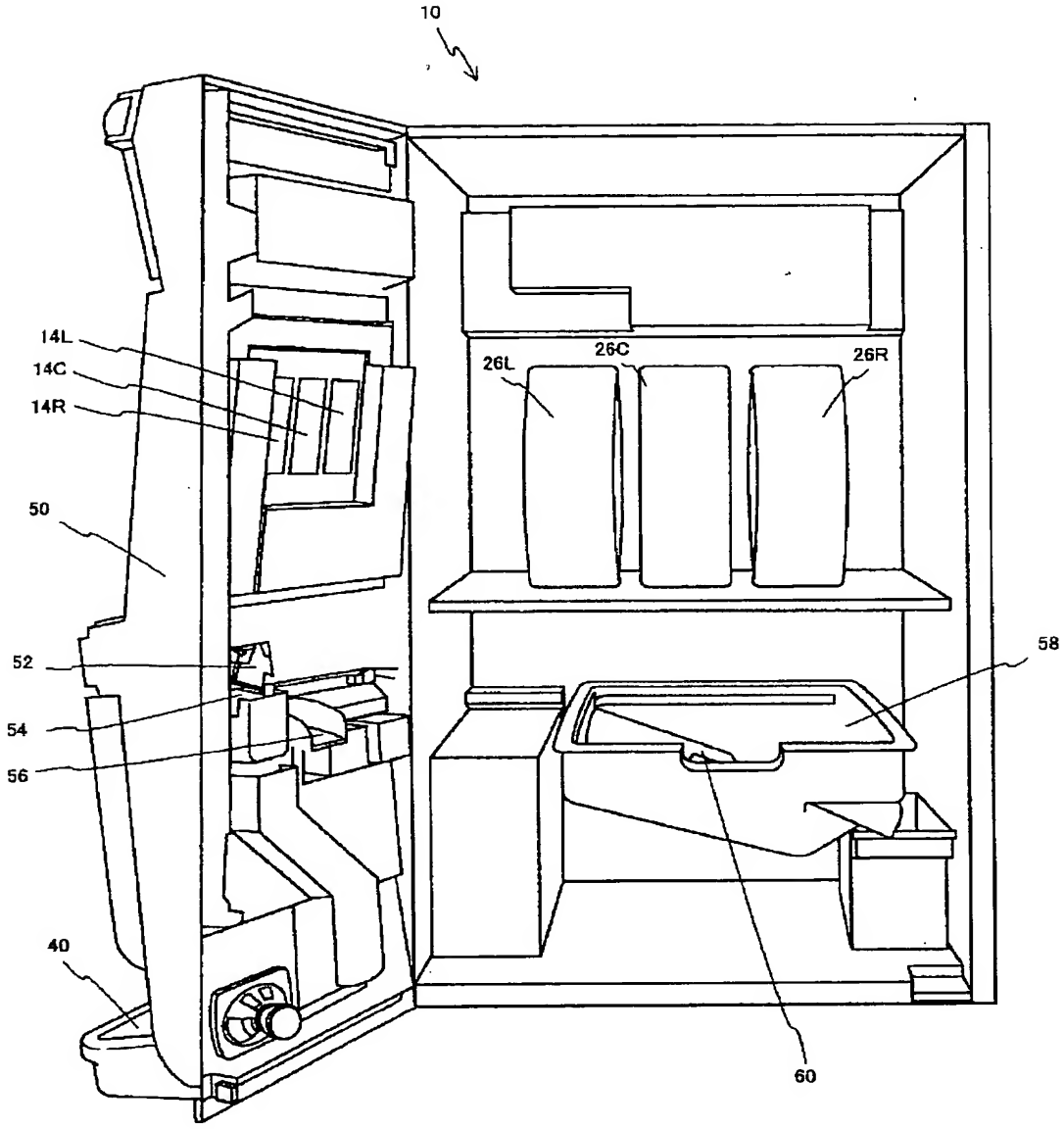
[Drawing 7]

| | 1枚 | 2枚 | 3枚 | |
|---|---|---|---|---|
| BB | a1 | a2 | a3(=201) | 0～200 |
| RB | b1 | b2 | b3(=381) | 201～380 |
| スイカ | c1 | c2 | c3(=801) | 381～800 |
| ベル | d1 | d2 | d3(=1901) | 801～1900 |
| 4枚チェリー | e1 | e2 | e3(=4001) | 1901～4000 |
| 2枚チェリー | f1 | f2 | f3(=10001) | 4001～10000 |
| 再遊技 | g1 | g2 | g3(=18001) | 10001～18000 |
| 外れ | h1 | h2 | h3 | 18001～65535 |

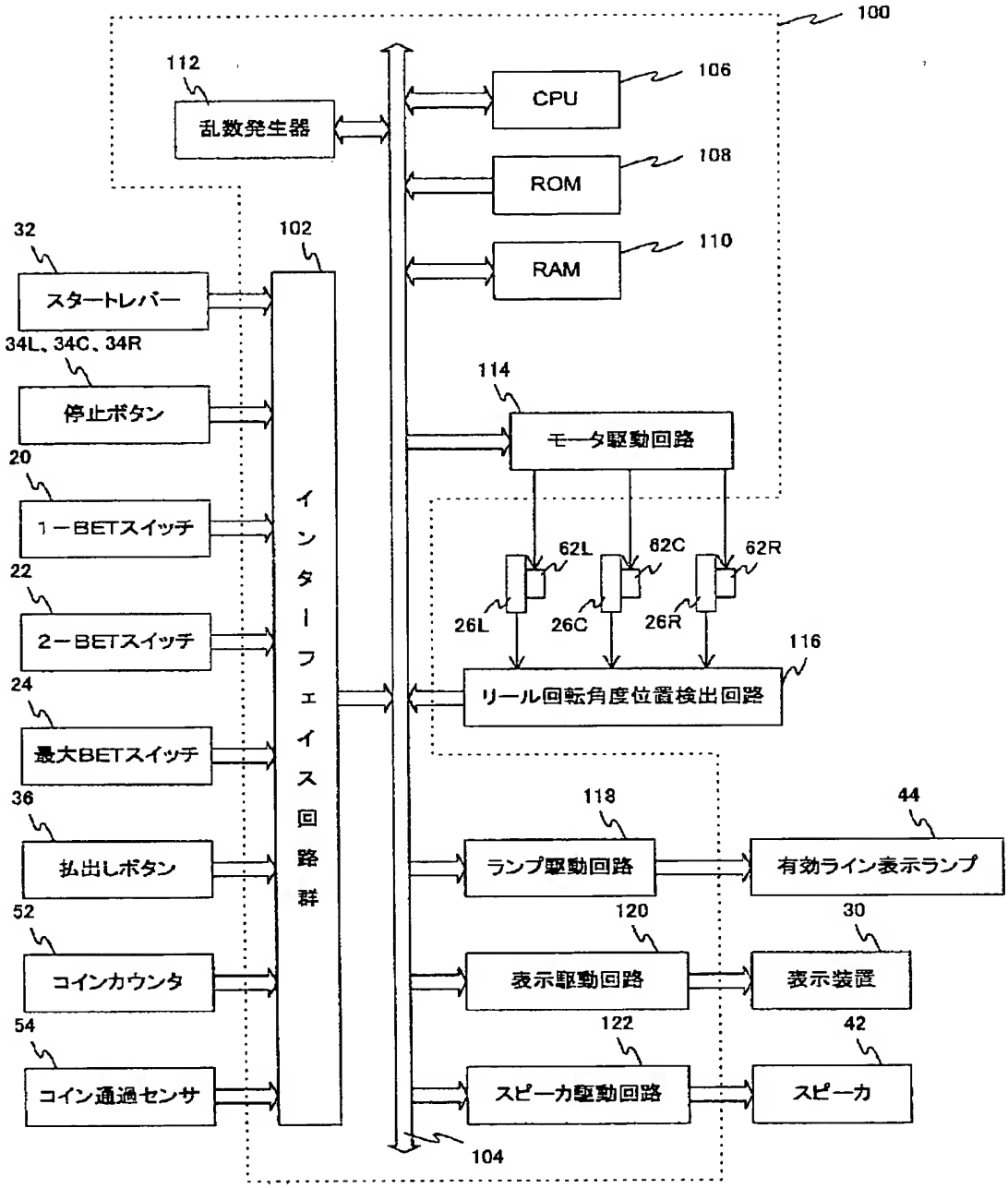
[Drawing 8]



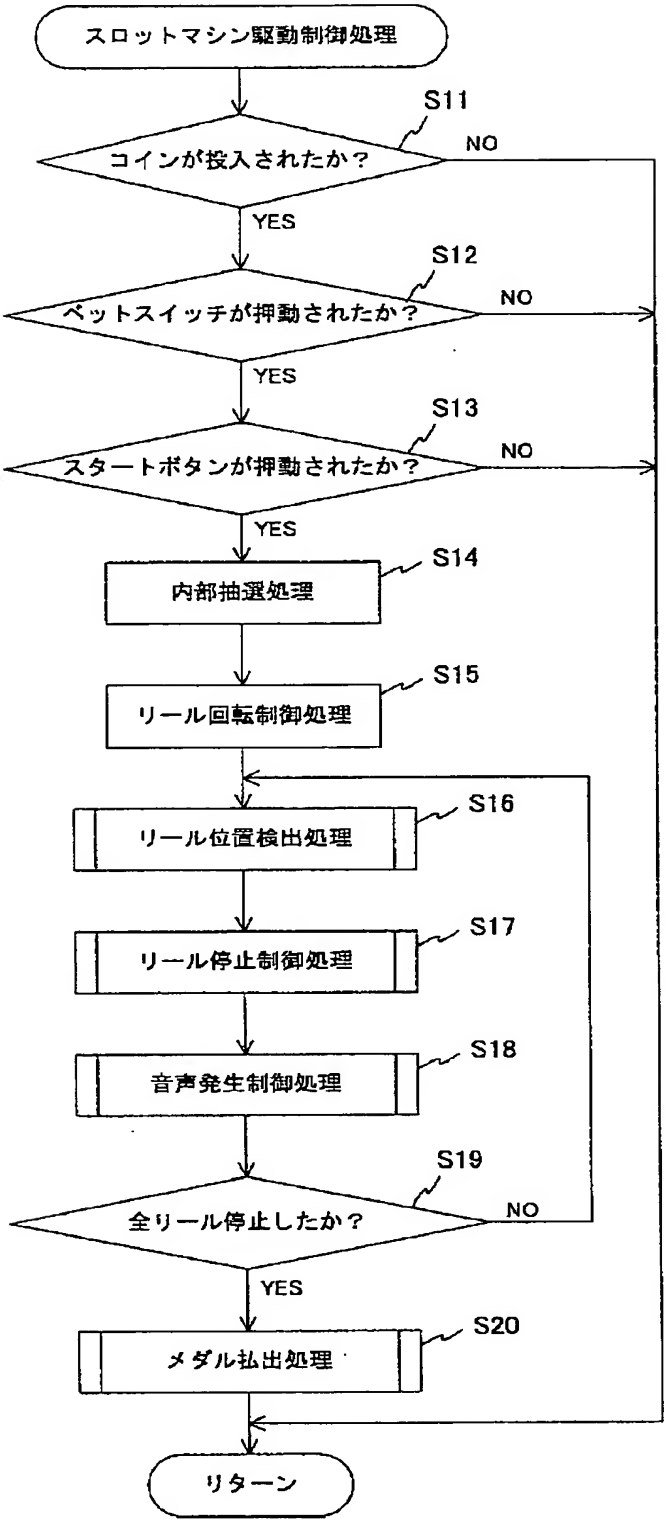

[Drawing 4]




[Drawing 5]


100
112
乱数発生器
CPU
106
ROM
108
RAM
110
32
102
スタートレバー
34L、34C、34R
停止ボタン
114
モータ駆動回路
20
1－BETスイッチ
62L
62C
62R
22
2－BETスイッチ
26L
26C
26R
116
リール回転角度位置検出回路
24
最大BETスイッチ
インターフェイス回路群
36
払出しボタン
118
ランプ駆動回路
44
有効ライン表示ランプ
52
コインカウンタ
120
表示駆動回路
30
表示装置
54
コイン通過センサ
122
スピーカ駆動回路
42
スピーカ
104

[Drawing 6]


スロットマシン駆動制御処理
S11
コインが投入されたか？
NO
YES
S12
ベットスイッチが押動されたか？
NO
YES
S13
スタートボタンが押動されたか？
NO
YES
S14
内部抽選処理
S15
リール回転制御処理
S16
リール位置検出処理
S17
リール停止制御処理
S18
音声発生制御処理
S19
全リール停止したか？
NO
YES
S20
メダル払出処理
リターン

[Drawing 10]

| 第1リール（26L） | 第2リール（26C） | 第3リール（26R） |
|---|---|---|
| F | F | — |
| … | … | — |

(a)

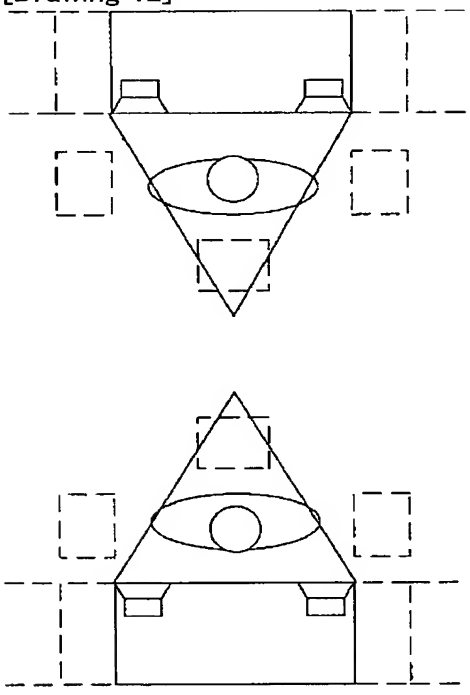
| 第1リール（26L） | 第2リール（26C） | 第3リール（26R） |
|---|---|---|
| C | C | — |
| … | … | — |

(b)

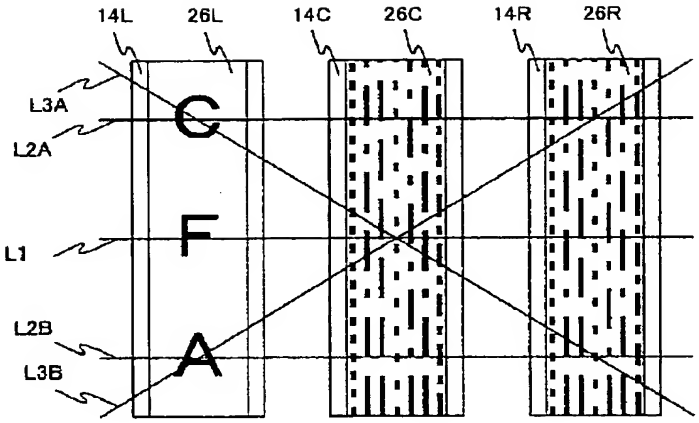
| 第1リール（26L） | 第2リール（26C） | 第3リール（26R） |
|---|---|---|
| A | A | — |
| … | … | — |

(c)

[Drawing 12]



[Drawing 9]




(a)

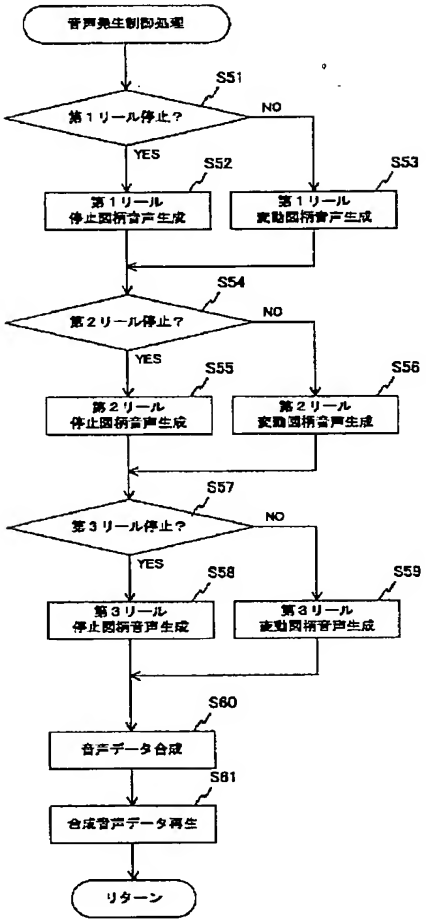
| 第1リール (26L) 上側 | 第2リール (26C) |
|---|---|
| C | B |
| | C |
| | D |
| | G |
| | D |
| | A |
| | E |
| | G |
| | D |
| | E |
| | B |
| | D |
| | E |
| | D |
| | A |
| | E |
| | G |
| | D |
| | B |
| | F |
| | D |

| 第1リール (26L) 中央 | 第2リール (26C) |
|---|---|
| F | B |
| | C |
| | D |
| | G |
| | D |
| | A |
| | E |
| | G |
| | D |
| | E |
| | B |
| | D |
| | E |
| | D |
| | A |
| | E |
| | G |
| | D |
| | B |
| | F |
| | D |

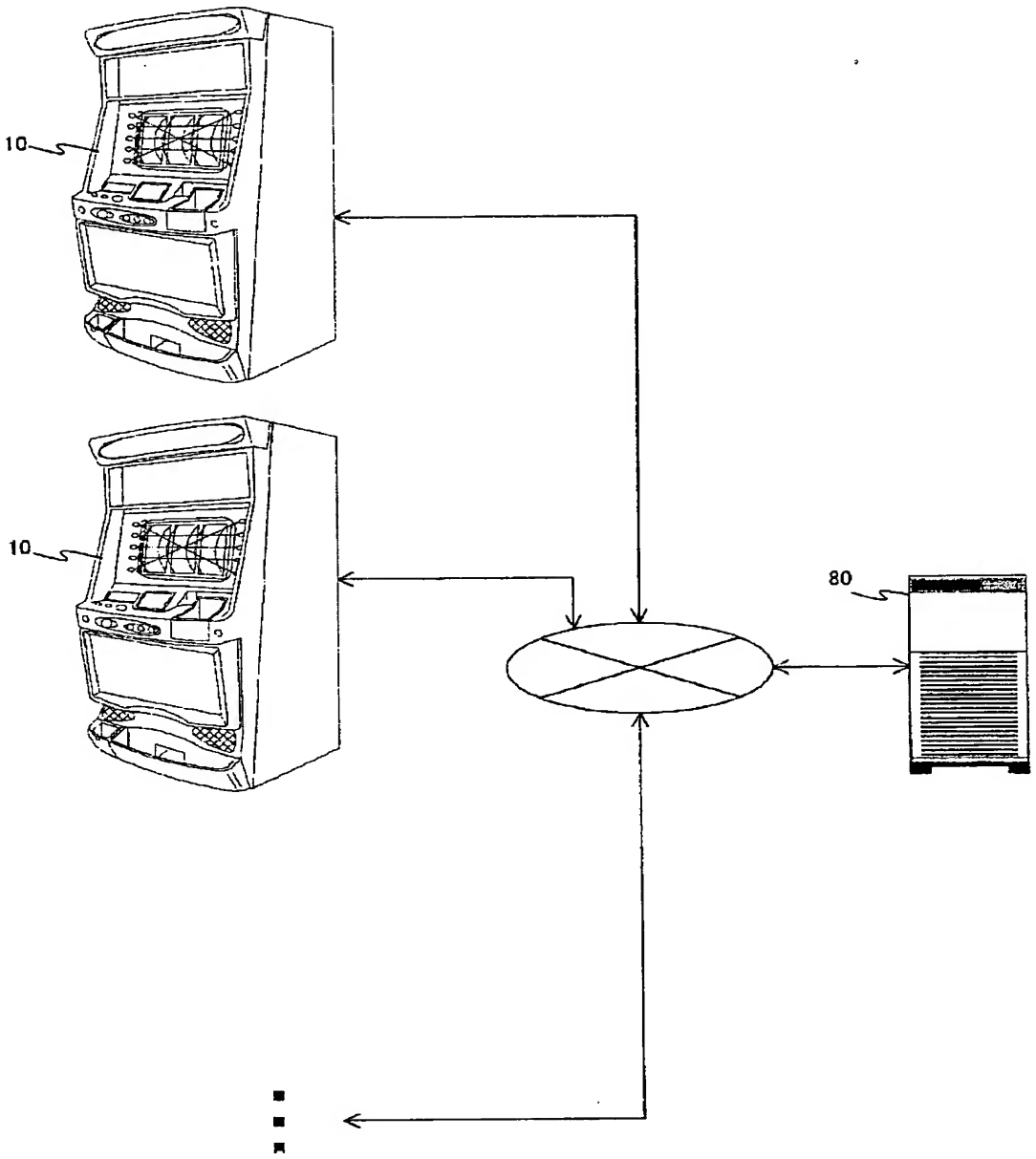
| 第1リール (26L) 下側 | 第2リール (26C) |
|---|---|
| A | B |
| | C |
| | D |
| | G |
| | D |
| | A |
| | E |
| | G |
| | D |
| | E |
| | B |
| | D |
| | E |
| | D |
| | A |
| | E |
| | G |
| | D |
| | B |
| | F |
| | D |

(b)

[Drawing 11]


音声発生制御処理
S51
第１リール停止？
NO
YES
S52
第１リール
停止図柄音声生成
S53
第１リール
変動図柄音声生成
S54
第２リール停止？
NO
YES
S55
第２リール
停止図柄音声生成
S56
第２リール
変動図柄音声生成
S57
第３リール停止？
NO
YES
S58
第３リール
停止図柄音声生成
S59
第３リール
変動図柄音声生成
S60
音声データ合成
S61
合成音声データ再生
リターン

[Drawing 13]




[Translation done.]